

FIG. 1

FIG. 1

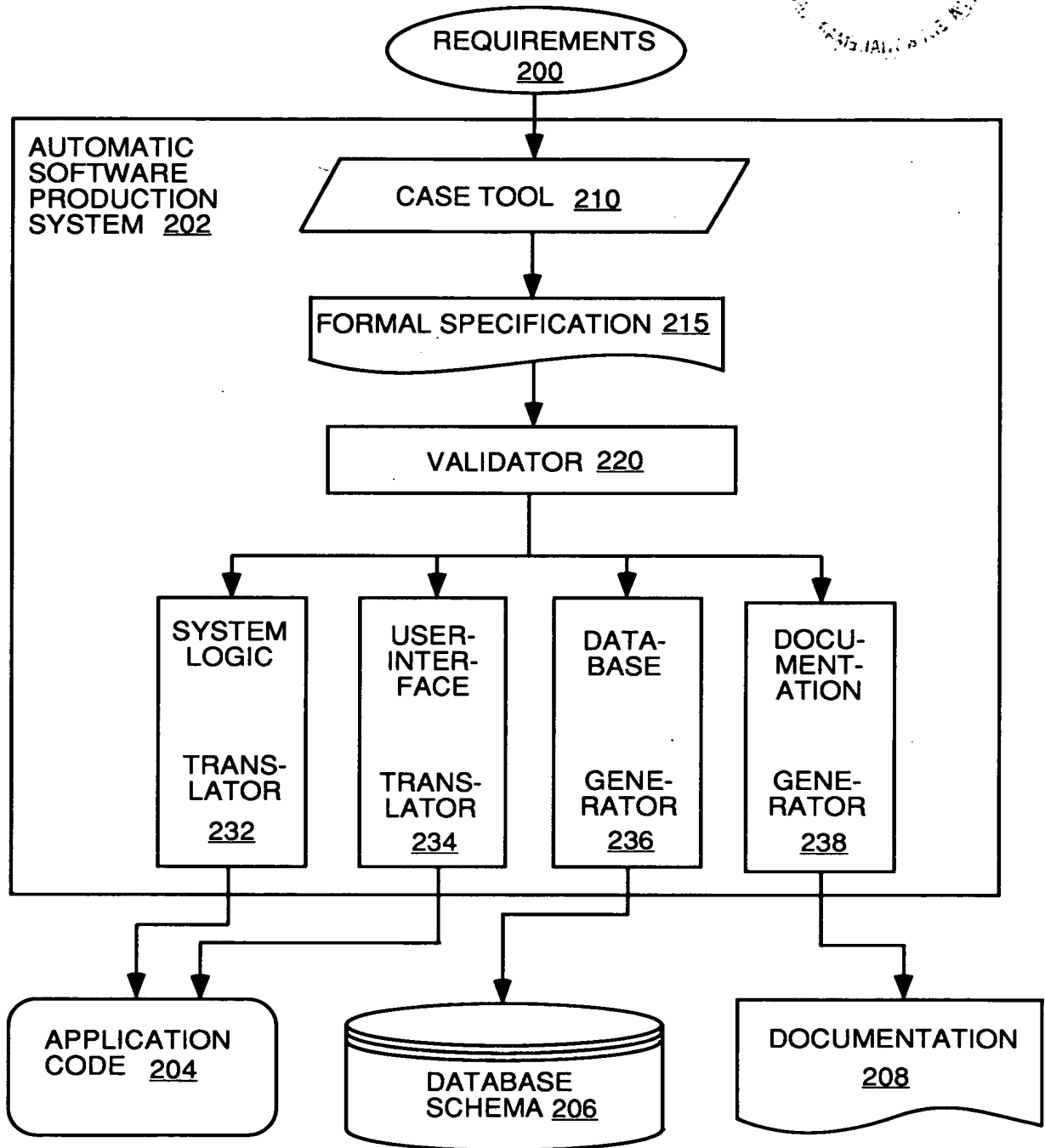
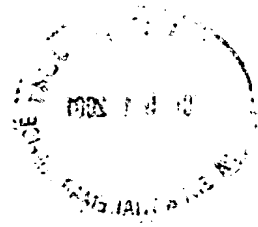


FIG. 2

FIG. 3

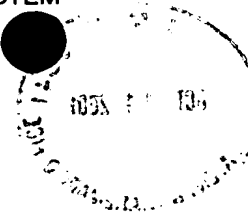
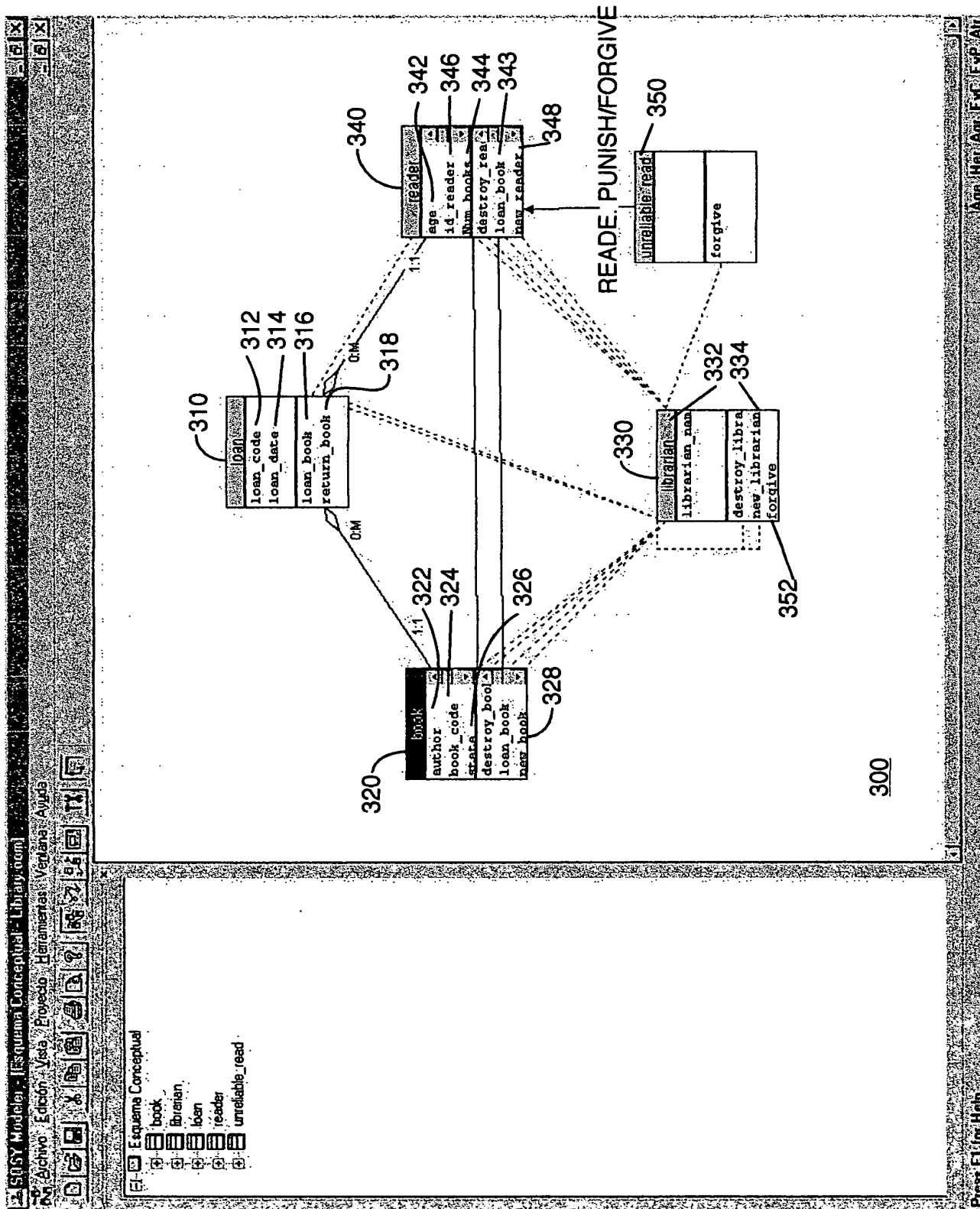
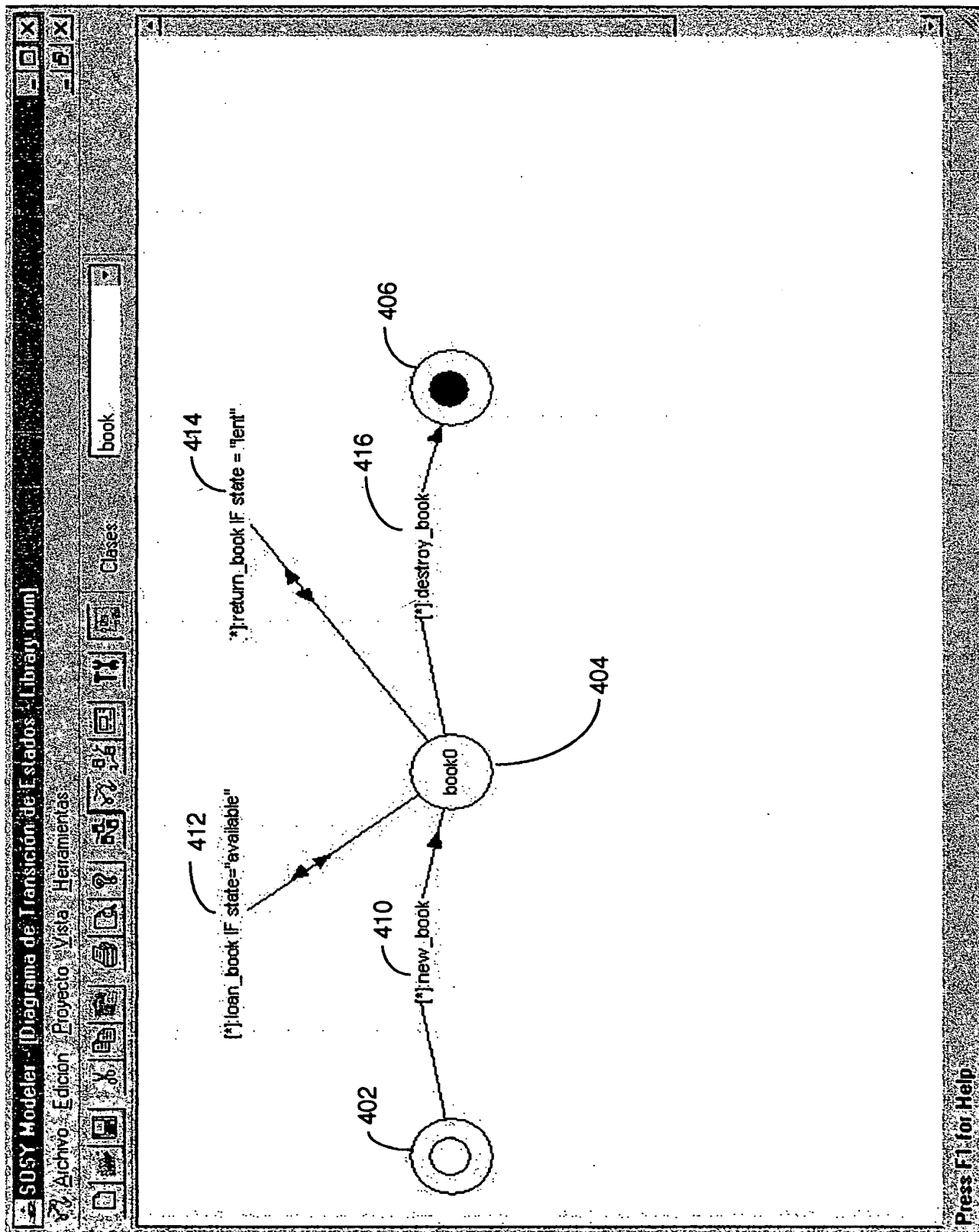


FIG. 3



707007" 2802/860

FIG.
4A



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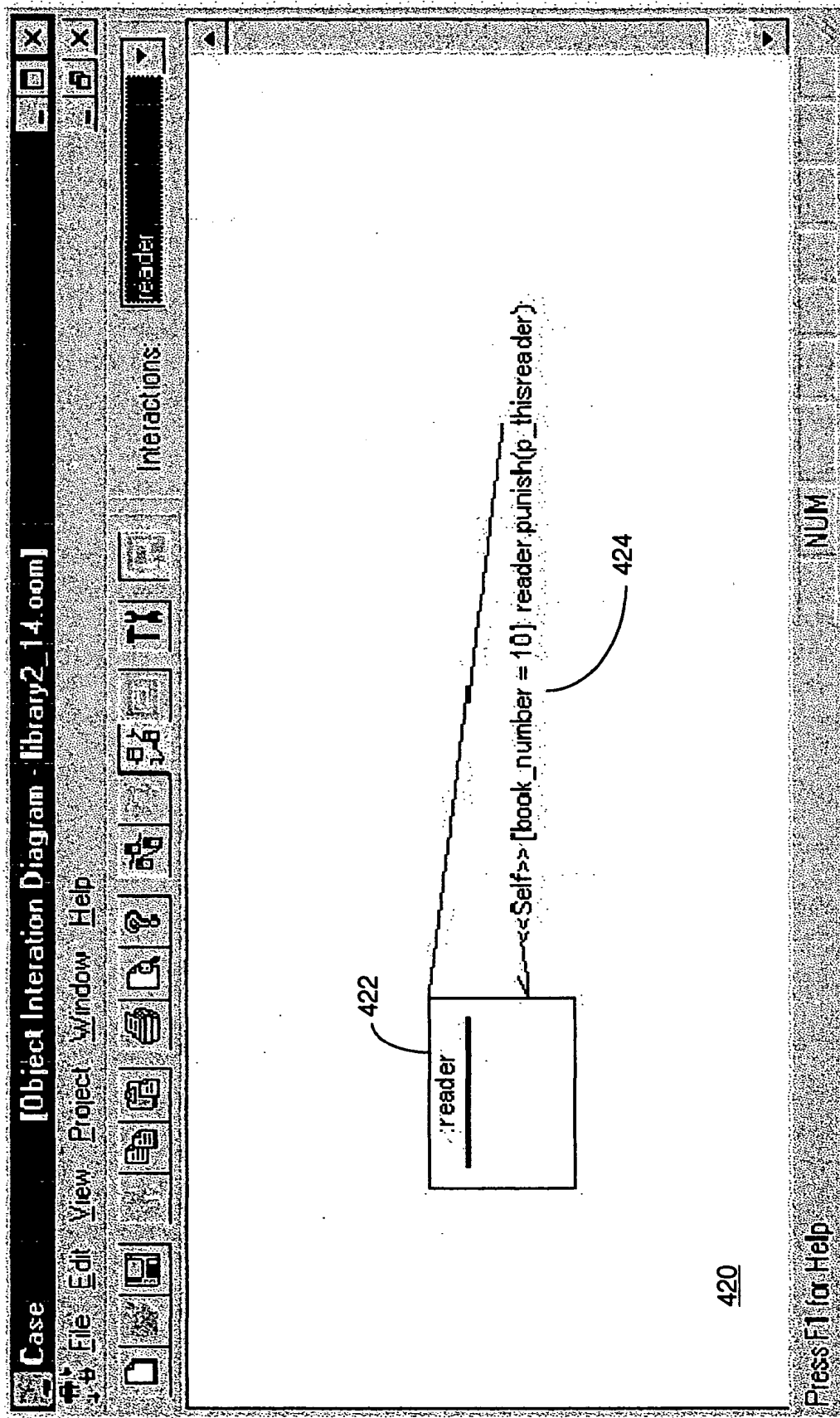
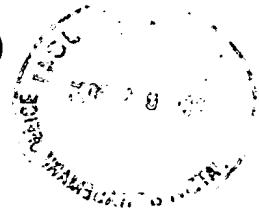


FIG. 4B

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Functional Model

Class: Attribute:

OK Cancel

Event	Effect	Condition
loan_book	+1	
return_book	-1	

Add Modify Delete

Category: ☒ Push-pop ☐ State-independent ☐ Discrete-domain

Valuation Details

Event: Action type:

Valuation condition:

IF:

Effect of the event:

FIG. 5

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES OF SYSTEM LOGIC
TRANSLATORS WILL PERFORM

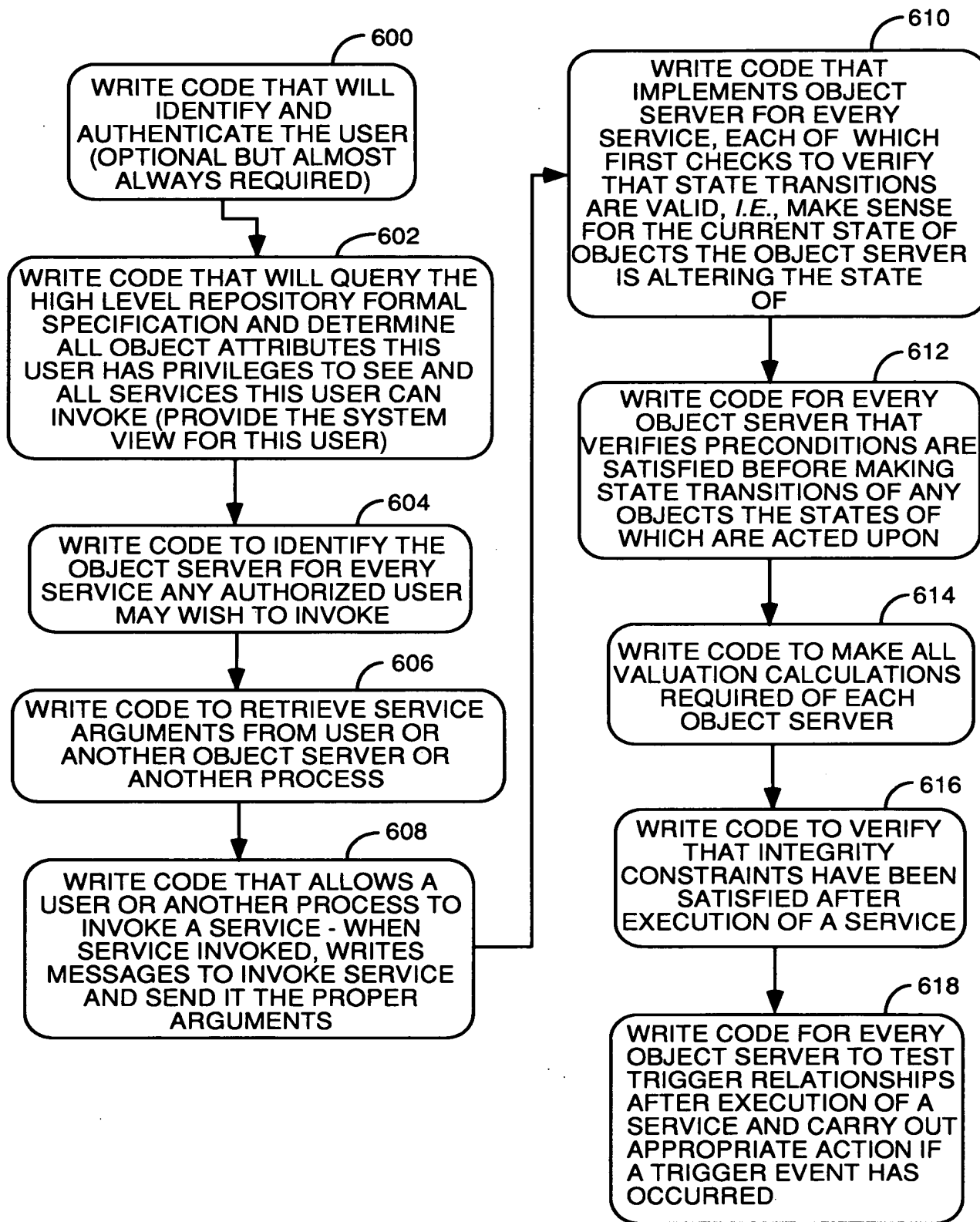


FIG. 6

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE USER INTERFACE
TRANSLATOR SUBGENUS WILL PREFORM

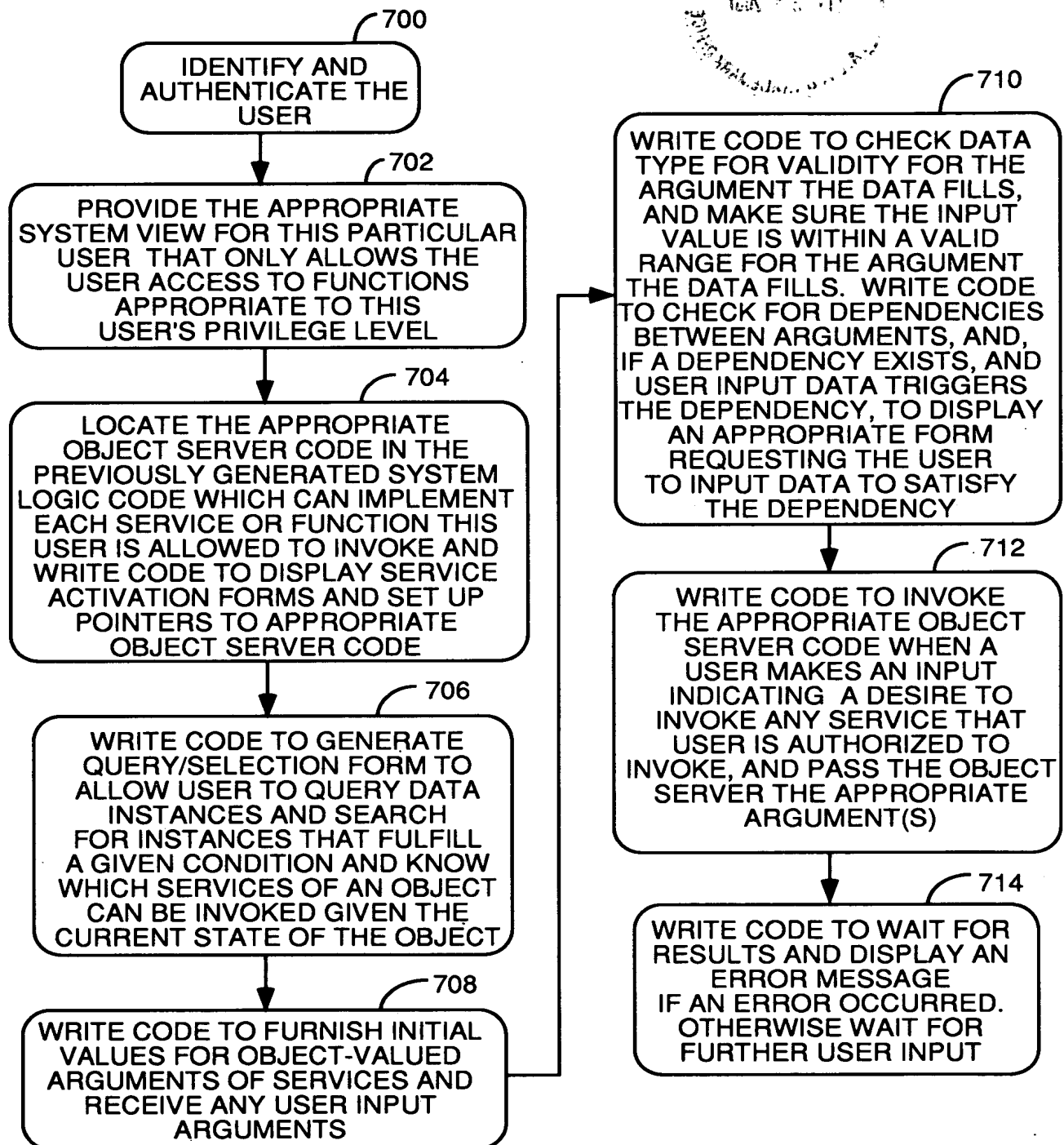


FIG. 7

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE DATABASE
GENERATOR TRANSLATOR SUBGENUS WILL PERFORM

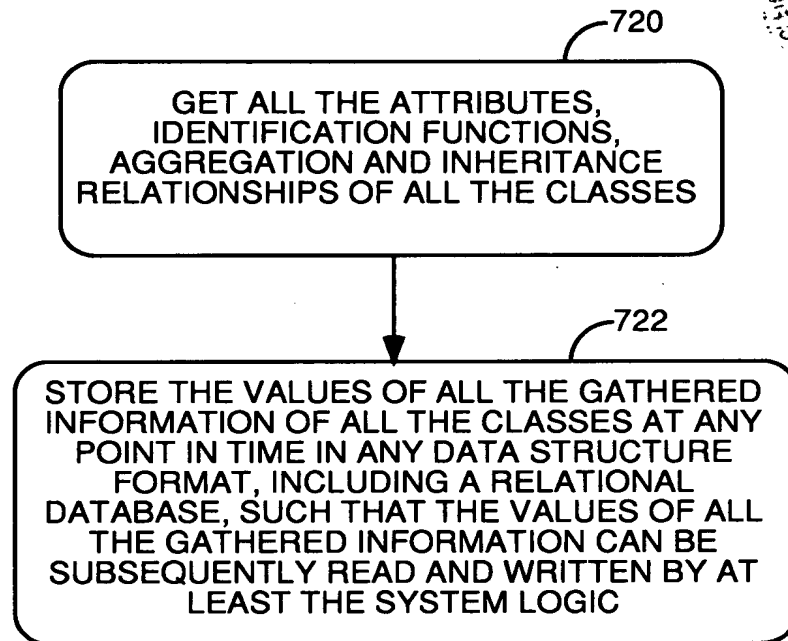
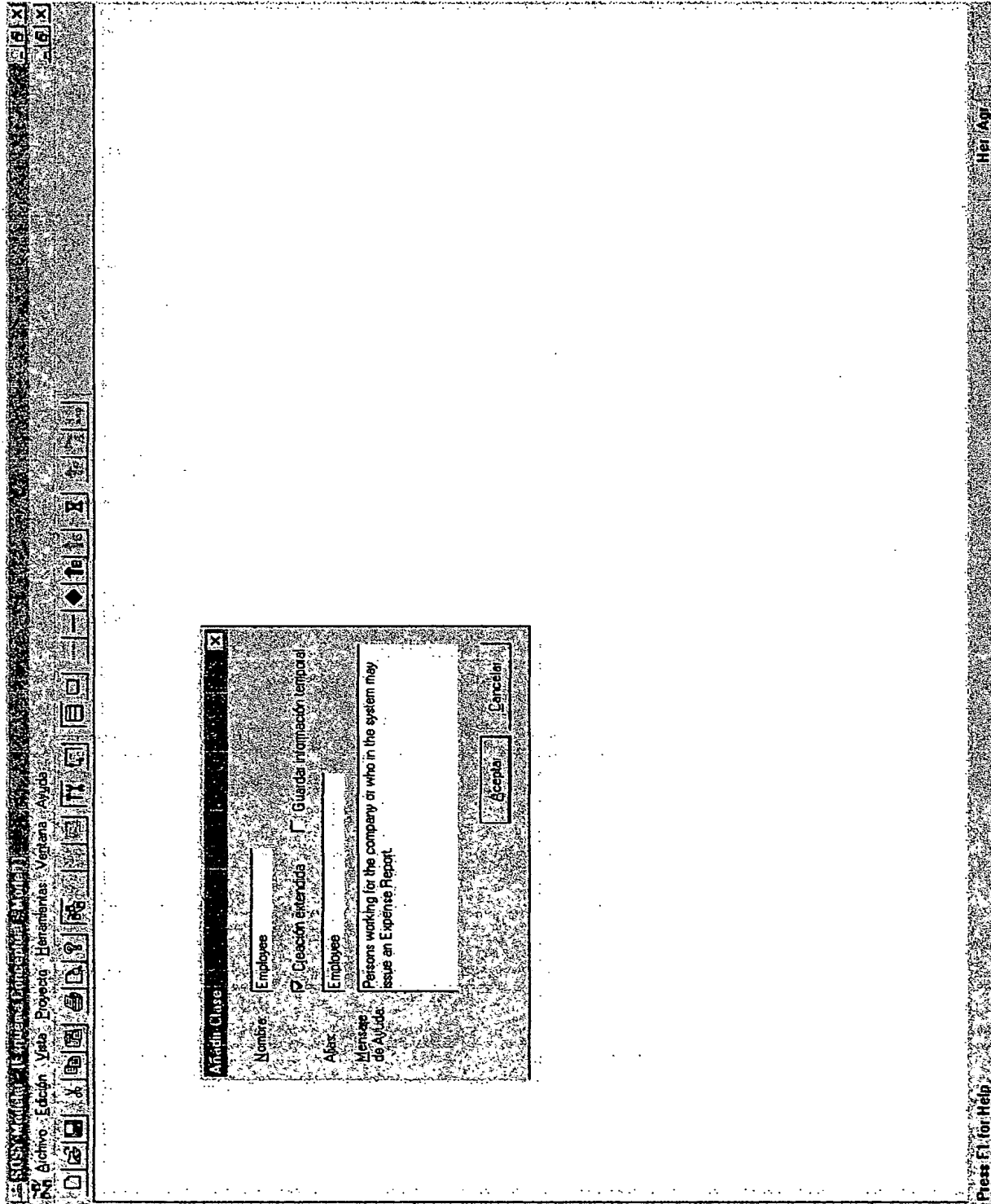


FIG. 8

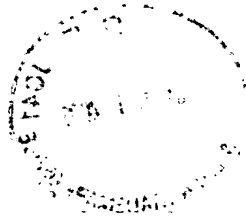
CLASS CREATION
DIALOG

FIG. 9A



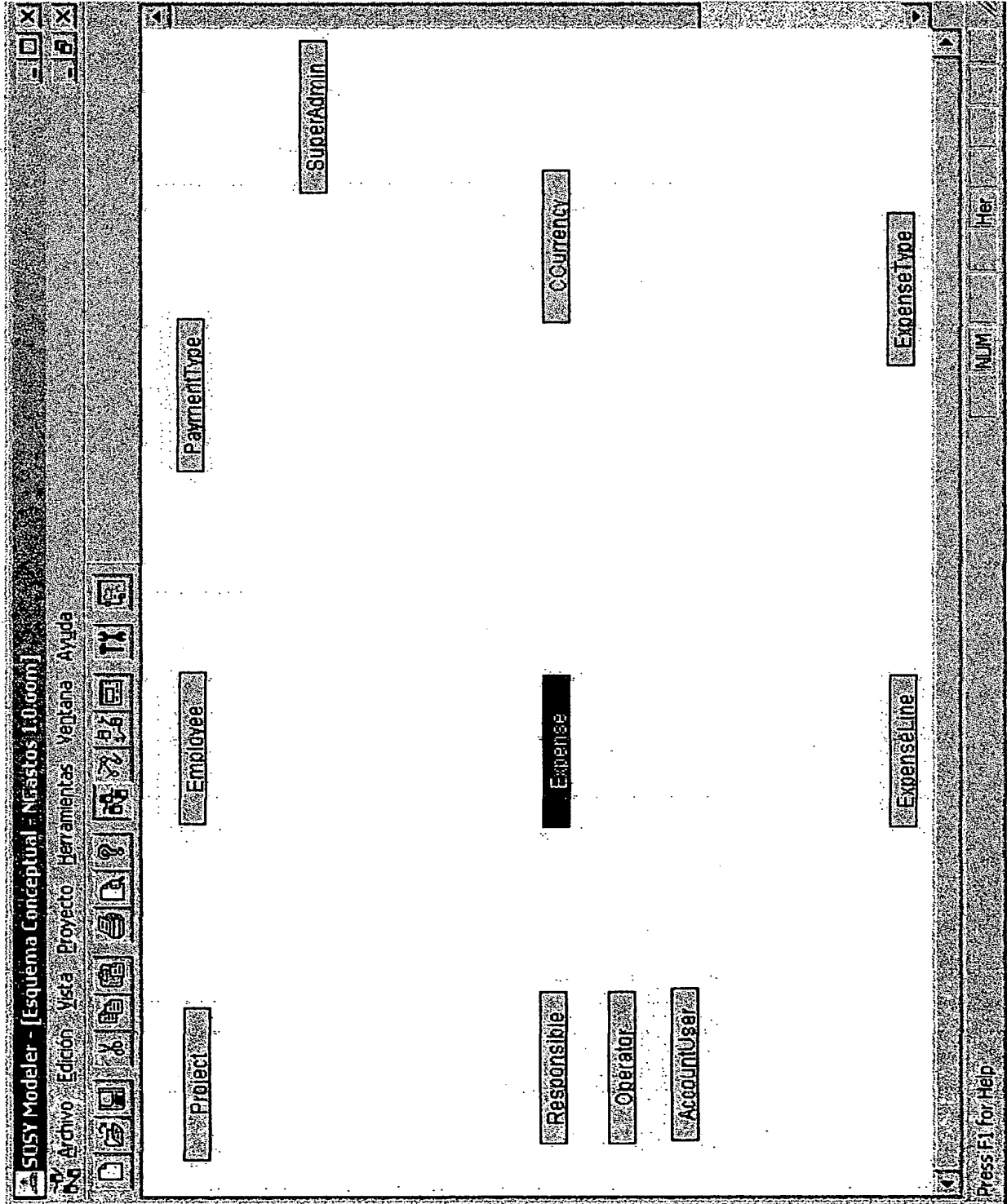
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AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,087
ISSUING DATE: 06/01/01
JACKET NO. CHG-001.2P



ALL CLASSES
NEEDED AND
CREATED IN
EXPENSE
MANAGEMENT
SYSTEM

FIG. 9B



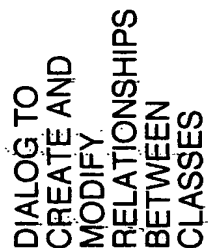
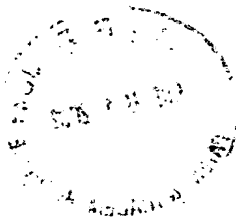


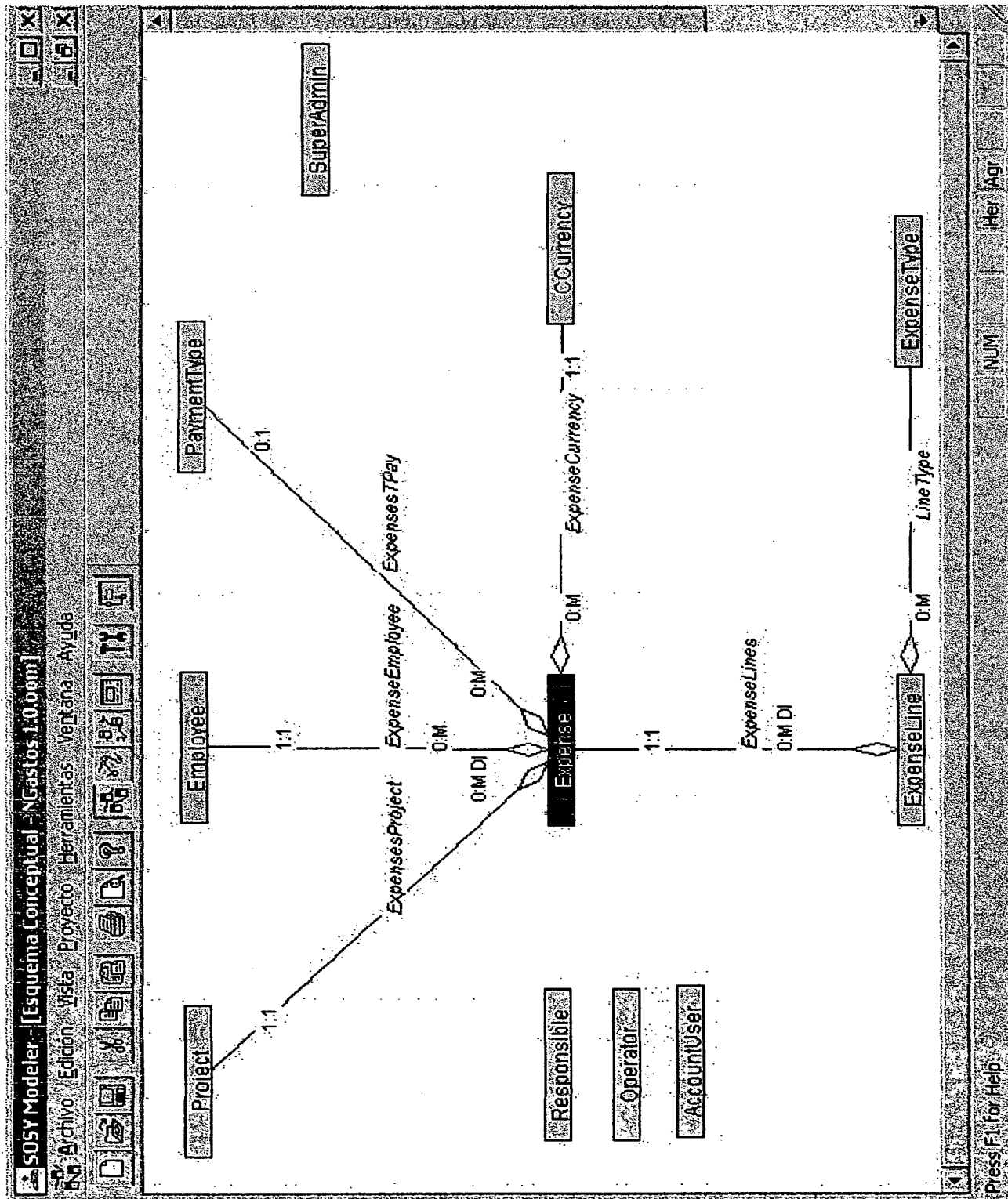
FIG. 8C

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GRAPHIC DIALOG
TO CREATE
RELATIONSHIPS
BETWEEN
CLASSES AND
GRAPHICALLY
SHOW THE
RELATIONSHIPS
SO CREATED

FIG. 10



FOOT" 2822860

Clase

Atributos

Restricciones

Agentes

Transacciones

Relaciones

Generalidades

Atributos

Nombre	Tipo atributo	Tipo dato	Id	Tamaño	Valor defecto	Pedir al crear	Nulos
PresentDate	Constante	Date			today()	Si	No
Status	Variable	Int			0	No	No
Cause	Variable	String		255		Si	No
AuthoDate	Variable	Date			NULL	No	Si
AuthoComments	Variable	String		255	NULL	No	Si
PaymentDate	Variable	Date			NULL	No	Si
PayComments	Variable	String		255	NULL	No	Si
TotExpenses	Derivado	Real					
TotExpensesCur	Derivado	Real					
Advances	Variable	Real			0	Si	No
AdvancesCur	Derivado	Real					
Exchange	Variable	Real				No	Si
Balance	Derivado	Real					
BalanceCur	Derivado	Real					

Limpiar

Notas>>

Información Temporal

☐

Nombre

Tipo Atributo

Tipo Dato

Alias

Observaciones

Clase

Expense

Aceptar

Cancelar

FIG. 11A

TOTOT" 2802/860

Clase

Atributos

Servicios

Derivaciones

Restricciones

Agentes

Transacciones

Relaciones

Generalidades

Atributo

Balance

Fórmulas de Derivación

Condición

Fórmula

TotExpenses - Advances

Añadir

Modificar

Borrar

Condición

Fórmula

Observaciones

Clase:

Expense

Aceptar

Cancelar

FIG. 11B

TOTOT" 28022860

SERVICES OF CLASS
"EXPENSE"

FIG. 12

Class: Expense

Atributos | Servicios | Derivaciones | Restricciones | Agentes | Transacciones | Relaciones | Generalidades

Eventos y Transacciones

Servicios:

Nombre	Características
newexpense	New
delexpense	Destroy
modify	
close	
authorize	
approve	
pay	
rejectautho	
rejectpayment	
InsPaymentType	Shared with PaymentType
BoPPaymentType	Shared with PaymentType
DELETEALL	Tran
TPAY	Tran

Parámetros:

Nombre	Tipo dato
p_thisExpense	Expense
p_Cause	String
p_Advances	Real
p_Exchange	Real

Acciones: Añadir, Modificar, Borrar, Copiar, Limpiar, Notas >>

Nombre: Tipo dato:

Tamaño: Nulos: ☐ Colección: ☐

Alias: Valor por defecto:

Observaciones:

Nombre: Transacción: ☐ New: ☐ Destroy: ☐ Uso interno: ☐

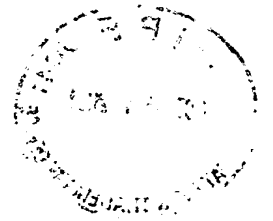
Alias: Edit a Expense Report:

Mensaje de Ayuda: Allows to edit some data of ar:

Observaciones:

Clase: Expense Aceptar Cancelar

101001" 28022860



DIALOG TO DEFINE
FORMULA FOR
"DELETEALL"
TRANSACTION

FIG. 13

Clase: [Expense]

Transacción: [DELETEALL]

Fórmula

FOR ALL Lines DO Lines.deleteAll(Lines). deleteExpense(THIS)

Acción: [Expense]

Clase/Rol: [Expense]

Agentes: [Service] [Approve] [p_thisExpense] [Inicializar]

Parámetros: [p_thisExpense]

Observaciones:

Detalles

Crear Parámetro en la Transacción

Cancelar

TOTOT" 28022860

INTEGRITY
CONSTRAINTS OF
EXPENSE CLASS

FIG. 14

Clase

Alributos | Servicios | Derivaciones | Restricciones | Agentes | Transacciones | Relaciones | Generalidades

Estáticas

Exchange > 0

1

Formulas

Exchange > 0

Message De Error

Exchange must be greater than zero

Dynamicas

Oper Temporal

Condicion1

Oper Temporal

Condicion2

Formulas

Message De Error

Clase: Expense

Aceptar

Cancelar

Añadir

Modificar

Borrar

Heredadas



Modelo Funcional

Clase: Expense Atributo: Cause

Evento: modify Efecto: p_Cause Condición:

☐ Cardinal ☒ De Estado ☐ De Situación

Detalles de Evaluación

Evento: modify

Condición de evaluación: IF

☐ Inferir para el resto de atributos

Efecto del evento: p_Cause

724 726

Aceptar Cancelar

Añadir Modificar Borrar

DIALOG BOX TO CREATE
EVALUATION OF "CAUSE"
ATTRIBUTE WITH THE "MODIFY"
EVENT TO FORM PART OF
FUNCTIONAL MODEL

FIG. 15

AGENT RELATIONSHIP
DIALOG THAT CAN BE
USED TO SET WHICH
SERVICES "ACCOUNT
USE" CAN ACCESS
AND VISIBILITY OF
CLASS ATTRIBUTES
FOR THIS USER

FIG. 16

Clase

Atributos

Servicios

Derivaciones

Restricciones

Agentes

Transacciones

Relaciones

Generalidades

Clase servidora:

EXPENSE

Servicio

newexpense:

modify

close

authorize

rejectautho

DELETEALL

Atributos

Cause

AuthoComments

Clase:

AccountUser

Clase AccountUser agente de:

Servicio

Expense approve

Expense rejectpayment

Expense TPAY

Temporalidad

No

No

No

Hacer temporal

No hacer temporal

Clase AccountUser tiene visibilidad sobre:

Atributos

Expense.id_Expense

Expense.PresentIDate

Expense.Status

Expense.PaymentIDate

Expense.PayComments

Expense.AuthoDate

Expense.TotExpenses

Expense.TotExpensesCur

Expense.Advances

Aceptar

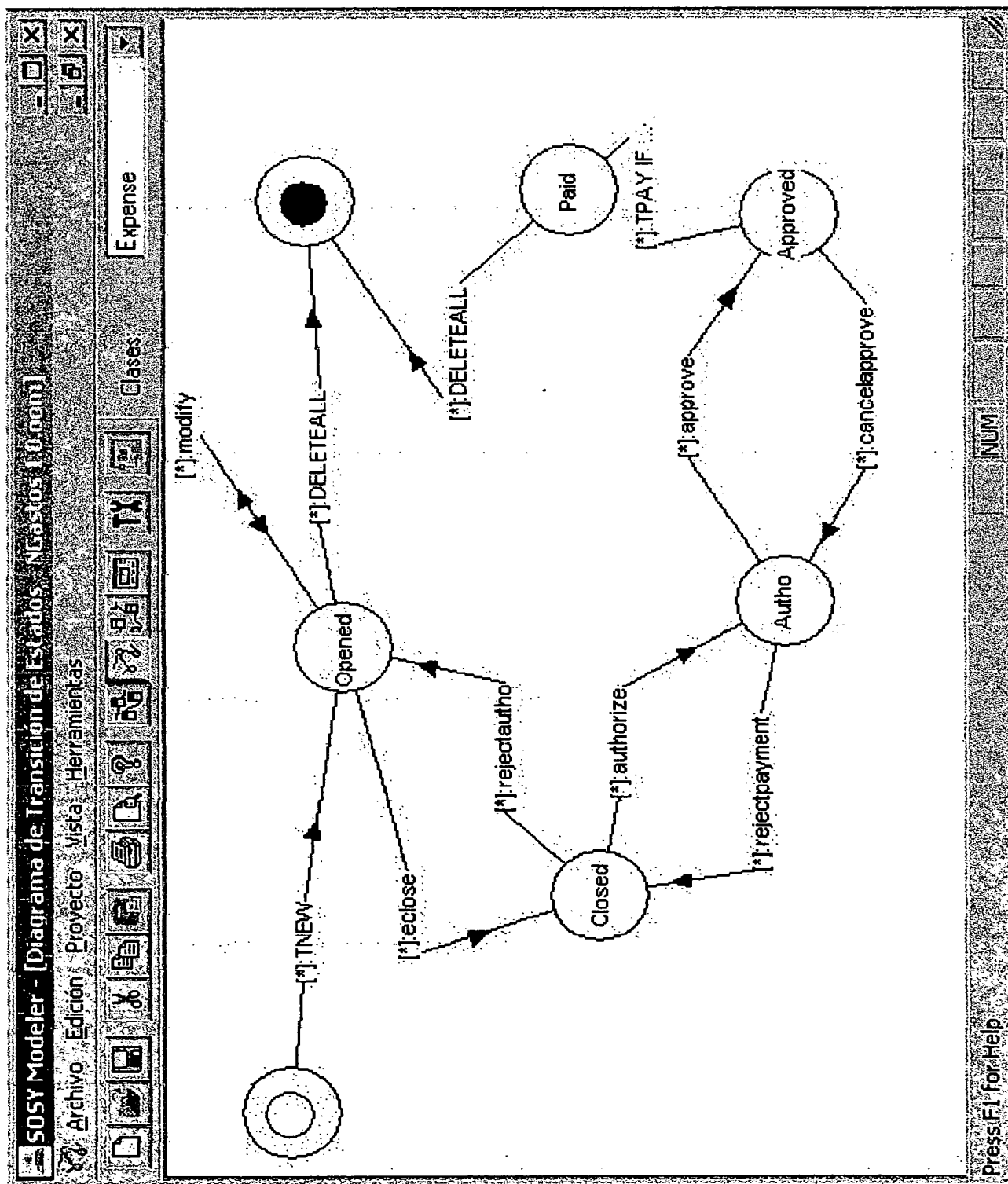
Cancelar

101001" 2802/860



STATE TRANSITION
DIAGRAM FOR
CLASS "EXPENSE"

FIG. 17



TPAY 2002/01/01



DIALOG BOX TO
MODEL
PRECONDITION

FIG. 18

Transición

Origen: Destino:

Detalles

Agentes:

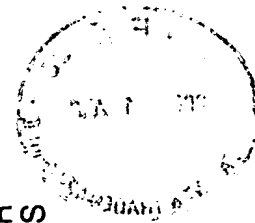
Servicio:

Precondición:
Balance > 0 OR ps_ReturnAdvance = TRUE

Condición de control:

Mensaje en caso de Error:
Check the advanced money excess

TOTDOT" 2802/2860



DIALOG BOX USED BY
SOSY MODELER
TO ESTABLISH A SET OF
ATTRIBUTES
TO BE DISPLAYED FOR
THE "EXPENSE" CLASS

FIG. 19

Conjunto de Visualización

Nombre: CV_Expense

Limpiar

Reiniciar

Atributos a visualizar

Atributo	Tipo dato
Project.ProjectName	String
Employee.EmpName	String
Employee.EmpSur...	String
Status	Int
AuthoDate	Date
PaymentDate	Date
TotExpenses	Real
Balance	Real

Atributos

<< Añadir

Eliminar >>

Subir

Bajar

Agregar

Atributo	Tipo dato
Cause	String
AuthoDate	Date
AuthoComments	String
PaymentDate	Date
PayComments	String
TotExpenses	Real
TotExpensesCur	Real
Advances	Real
AdvancesCur	Real
Exchange	Real
Balance	Real
BalanceCur	Real

Clase Expense

Aceptar

Cancelar

DIALOG BOX USED BY
SOSY MODELER
TO ESTABLISH THE
SEARCHING CRITERIA
FOR THE EXPENSE
CLASS AND TO ESTABLISH
THE FILTER FORMULA
TO USE AND THE
VARIABLES TO REQUEST
THE USER TO ENTER

FIG. 20

Filtro

Filtro

Expense Reports

Alias

Limpia

Borra

Formula

Project = vf_Project AND Employee = vf_Employee AND
PresentDate >= vf_DateIniIssue AND PresentDate <= vf_DateEndIssue AND
AuthoDate >= vf_DateIniApp AND AuthoDate <= vf_DateEndApp AND
PaymentDate >= vf_DateIniPay AND PaymentDate <= vf_DateEndPay AND

Observ

Variables

Nombre	Alias	Tipo dato	Tipo estilo	Estilo	Nueva	Modificar	Borra
vf_Project	Project	Project	Sel. Población				
vf_Employee	Employee	Employee	Sel. Población				
vf_DateIniIssue	Initial Issuing Date	Date					
vf_DateEndIssue	Final Issuing Date	Date					
vf_DateIniApp	Initial Approving D	Date					

Tipo

Simple

Objeto-valorado

Nombre

Alias

Tipo de dato

Estilo de introd

Estilo de selección

Clase Expense

Aceptar

Cancelar

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE
DOCUMENTATION GENERATOR TRANSLATOR SUBGENUS WILL PERFORM

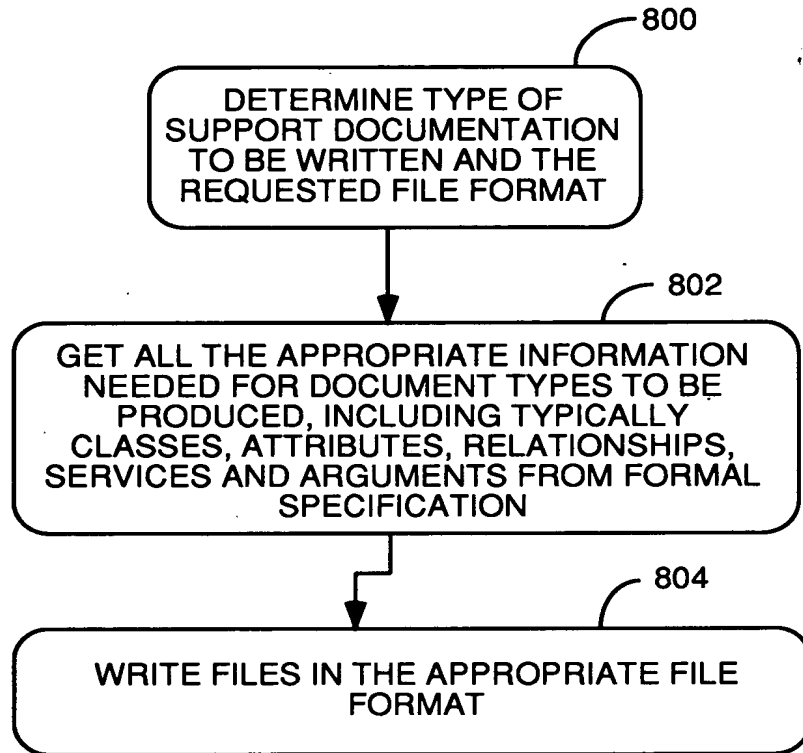


FIG. 21

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